



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,519	07/03/2001	Dale Francis Obeshaw	DP-300393	7536

7590 10/02/2002

EDMUND P. ANDERSON  
DELPHI TECHNOLOGIES, INC.  
Legal Staff  
P.O. Box 5052, Mail Code: 480-414-420  
Troy, MI 48007-5052

EXAMINER

ZIMMERMAN, JOHN J

ART UNIT	PAPER NUMBER
----------	--------------

1775

DATE MAILED: 10/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/898,519

Applicant(s)

OBESHAU, DALE FRANCIS

Examiner

John J. Zimmerman

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 6, 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## FIRST OFFICE ACTION

### *Information Disclosure Statement*

1. The information disclosure statements received December 11, 2001 (Paper No. 3), January 15, 2002 (Paper No. 6) and February 11, 2002 (Paper No. 7) have been considered. Initialed forms PTO-1449 are enclosed with this Office Action.

### *Specification*

2. The disclosure is objected to because of the following informalities: The section of the specification titled "Brief Description of the Drawings" (page 5) should contain brief individual descriptions of each drawing figure. Appropriate correction is requested.

### *Double Patenting*

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Art Unit: 1775

4. Claims 1-39 are provisionally rejected under the judicially created doctrine of double patenting over the pending claims of copending Application No. 09/704,228 and copending Application No. 09/900,762. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims describe the same contoured structural member. Copending Application No. 09/704,228 and copending Application No. 09/900,762 claim "contoured" members also and any additional structural components that may be required for some of the pending claims are covered by the "comprising" language of the claims of the copending applications. Also note that some of the claims of the copending applications require additional components. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

#### ***Claim Objections***

5. Claims 1 and 7 are objected to because of the following informalities: The spelling of "at" ("at least one layer") on the last lines of claims 1 and 7 should be corrected.

#### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1775

7. Claims 3-11, 19-20, 31-33 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. It is indefinite as to what is a "light" metal or a "heavy" metal (e.g. claim 3, 4, 8 and 9) since there is no official metallurgical standard defining these terms and applicant's disclosure does not adequately define the terms. Although it is noted that the paragraph at the top of page 13 of the specification lists various "light" and "heavy" metals, there appears to be no relationship between the atomic mass of the metal and qualifying for one of the two groupings. Since listed "light" metals (e.g. molybdenum, zinc) can be heavier in atomic mass than a listed "heavy" metal (e.g. nickel, copper, etc. . .), the atomic mass of the metal does not appear to be the difference between a "light" metal and a "heavy" metal in applicant's disclosure. Therefore it is indefinite as to what standard must be met to qualify as a "light" metal or a "heavy" metal in order to meet (or fail to meet) the claim limitations. Cancellation of these claims or replacing the indefinite terms with their associated Markush groups from the specification would overcome this rejection.

9. The term "initiator" is not defined in the claims and it is indefinite what is "initiated" or required by this term (e.g. see claims 6 and 11).

10. It is indefinite as to what is required of a "structural component" to allow (or not allow) the structural member to be a vehicular component (e.g. claim 5).

Art Unit: 1775

11. It is also indefinite as to what qualifies as a "vehicular component" or "vehicular module" since there is no standard definition of this term and almost any structural member can be used in vehicular construction, e.g. recreational vehicles, trailers, ships, planes, etc. . . (e.g. claims 5, 10, 19, 20).

12. It is indefinite as to what does (or does not) qualify as a "complex" shape (e.g. see independent claim 7, line 1; claim 20, line 1; claim 31, line 1; claim 37, line 1).

13. It is indefinite as to what is required of a "complex shape" to allow (or not allow) the structural member to be a vehicular module (e.g. claim 10).

### ***Claim Rejections - 35 USC § 102***

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

15. Claims 1-2, 4-7, 9-13, 15, 18-20 and 36-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Logan (U.S. Patent 6,227,252 B1).

16. Logan discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate honeycomb layer and a contoured outer layer (e.g. see Figures 1-4). The hollow contoured member is joined to additional structures (e.g. other hollow contoured members). The hollow cylindrical construction is a complex shape with inner and outer sheets bent around a central axis. The hollowed contoured member is a pipe (and therefore it can be capable of use in vehicle construction, e.g. super tankers). A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Regarding claims reciting an "initiator", any discontinuity in the article (e.g. a joint) may function as an initiator. Regarding article claims reciting process steps, Logan may not disclose the same process steps, but these claims are product claims and not process claims. When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Particularly note that in article claims reciting a method wherein the shrink wrap is added *and* removed, the shrink wrap would not be present in the claimed final article.

Art Unit: 1775

17. Claims 1, 2, 5-7, 10-13, 15, 18-20 and 36-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilkinson (U.S. Patent 4,161,231).

18. Wilkinson discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate honeycomb layer and a contoured outer layer (e.g. see Figures 1-4). The hollow contoured member is joined to additional structures (e.g. jet engines). The hollow cylindrical construction is a complex shape with inner and outer sheets bent around a central axis. Regarding claims reciting an "initiator", any discontinuity in the article (e.g. a joint) may function as an initiator. Regarding claims requiring that the member be part of a vehicle, the member of Wilkinson is part of a jet engine (e.g. see Figure 1). Regarding article claims reciting method steps, Wilkinson may not disclose the same process steps, but these claims are product claims and not process claims. When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q. 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Particularly note that in article claims reciting a method wherein the shrink wrap is added *and* removed, the shrink wrap would not be present in the claimed final article.

19. Claims 1-13, 16 and 36-39 are rejected under 35 U.S.C. 102(a) as being anticipated by Ohrn (U.S. Patent 6,116,290).

20. Ohrn discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate ribbed layer and a contoured outer layer (e.g. see Figures 1-10). The inner layer



Art Unit: 1775

may be a composite material (e.g. see column 2, lines 32-38). The hollow cylindrical construction is a complex shape with inner and outer sheets bent around a central axis. The hollow contoured member is joined to additional structures (e.g. other hollow contoured members). Regarding claims reciting an "initiator", any discontinuity in the article (e.g. a joint) may function as an initiator.

21. Claims 1-13, 15 and 36-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Mann (U.S. Patent 3,332,446).

22. Mann discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate wrapped ribbed structure layer and a contoured outer layer (e.g. see Figures 1-2). The hollow cylindrical construction is a complex shape with inner and outer sheets bent around a central axis. Regarding claims reciting an "initiator", any discontinuity in the article (e.g. a joint) may function as an initiator. Regarding article claims containing process language, Mann may not disclose the same process steps, but these claims are product claims and not process claims. When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Particularly note that in article claims reciting a method wherein the shrink wrap is added *and* removed, the shrink wrap would not be present in the claimed final article.

23. Claims 1-2, 5-7, 10-13, 15 and 36-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Frease (U.S. Patent 1,677,714).

Art Unit: 1775

24. Frease discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate wrapped ribbed structure layer and a contoured outer layer (e.g. see Figures 1-5). The hollow cylindrical construction is a complex shape with inner and outer sheets bent around a central axis. Regarding claims reciting an "initiator", any discontinuity in the article (e.g. a joint) may function as an initiator. Regarding claim 35, Frease may not disclose the same process steps, but these claims are product claims and not process claims. When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q. 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Particularly note that in article claims reciting a method wherein the shrink wrap is added and removed, the shrink wrap would not be present in the claimed final article.

25. Claims 1-20 and 36-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyajima (U.S. Patent 5,256,969).

26. Miyajima discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate honeycomb layer and a contoured outer layer (e.g. see Figures 4-7). The materials that can be used to make the structure of Miyajima include light metals, heavy metals, composite materials and combinations of these (e.g. see column 8, lines 21-33). The hollow contoured member is joined to additional structures (e.g. see Figures 8, 10). The hollow cylindrical construction is a complex shape with inner and outer sheets bent around a central axis. Regarding claims reciting an "initiator", any discontinuity in the article (e.g. a joint) may function as an initiator. Regarding article claims reciting process steps, Miyajima may not

Art Unit: 1775

disclose the same process steps, but these claims are product claims and not process claims.

When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Particularly note that in article claims reciting a method wherein the shrink wrap is added *and* removed, the shrink wrap would not be present in the claimed final article.

27. Claims 1-2, 5-14, 18-20 and 36-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Jonda (U.S. Patent 4,025,675).

28. Jonda discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate honeycomb layer and a contoured outer layer (e.g. see Figures 1-4). The materials that can be used to make the structure of Jonda include resin composite materials. The hollow contoured member is intended to be joined to additional construction (e.g. see column 1, lines 11-15). The hollow cylindrical construction is a complex shape with inner and outer sheets bent around a central axis. Regarding claims reciting an "initiator", any discontinuity in the article (e.g. a joint) may function as an initiator. Regarding article claims reciting process steps, Jonda may not disclose the same process steps, but these claims are product claims and not process claims. When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Particularly note that in article claims reciting a method

Art Unit: 1775

wherein the shrink wrap is added *and* removed, the shrink wrap would not be present in the claimed final article.

***Claim Rejections - 35 USC § 103***

29. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

30. Claims 1-24, 31-33 and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan (U.S. Patent 6,227,252 B1) in view of Ohrn (U.S. Patent 6,116,290).

31. Logan is described in the rejection under 35 U.S.C. 102(e) above. Regarding claims drawn to specific materials (e.g. claims 3, 8, 12-14, etc. . .), Logan may differ from these claims in that Logan only discloses examples of Grade X65 steel (e.g. see column 3, lines 21-23) for his contoured structural member. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use any conventional materials for the contoured structural member that might be suited to particular structural requirements and particular environments in which Logan's structural member might be useful. Ohrn is applied to clearly show that composite materials and combinations of metal and composite material are indeed conventionally used in pipelines (e.g. see column 1, lines 6-8; column 2, lines 32-38). In view of Ohrn, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use composite materials in pipelines constructed with the intermediate layers as in

Art Unit: 1775

Logan, because Ohrn clearly discloses that composite materials are conventionally used in pipeline construction when their properties would be beneficial. The examiner also takes Official Notice that light metals (e.g. aluminum, titanium, etc. . .) and stainless steels are conventionally used in piping and therefore their use in Logan's structural configuration would have been considered an obvious variation on the disclosure of Logan. Regarding claims requiring an additional structural component, any associated structures conventionally used with piping (e.g. couplings, supports , protective coatings, etc. . .) would satisfy this requirement. Regarding the method claims reciting roll wrapping, the method of wrapping layers and using a mandrel is a conventional method of forming laminated tubular structures in the art and would not be a patentable distinction over Logan for forming Logan's contoured structural member. Regarding article claims that recite the method by which the article is made, Logan may not disclose the same process steps, but these claims are product claims and not process claims. When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Regarding claims reciting an "initiator", any discontinuity in the article (e.g. a joint) may function as an initiator. Regarding claims requiring particular configurations (e.g. bent), pipelines are conventionally bent to follow the terrain and forming a bend in the pipes of Logan would be an obvious variation on Logan's article because it would allow the pipe to follow the terrain.

Application/Control Number: 09/898,519

Art Unit: 1775

32. Claims 1-24, 31-33 and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frease (U.S. Patent 1,677,714) in view of Ohrn (U.S. Patent 6,116,290).

33. Frease discloses a hollow contoured structural member comprising a contoured inner layer, an intermediate wrapped ribbed structure layer and a contoured outer layer (e.g. see Figures 1-5). Regarding claims drawn to specific materials, Frease may differ from these claims in that Frease may not disclose specific materials for his contoured structural member. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use any conventional materials for the contoured structural member that might be suited to particular structural requirements and particular environments in which Frease's structural member might be useful. Ohrn is applied to clearly show that composite materials and combinations of metal and composite material are indeed conventionally used in pipelines (e.g. see column 1, lines 6-8; column 2, lines 32-38). In view of Ohrn, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use composite materials in pipes constructed with the intermediate layers as in Frease, because Ohrn clearly discloses that composite materials are conventionally used in pipe construction when their properties would be beneficial. The examiner takes Official Notice that light metals (e.g. aluminum, titanium, etc. .), composite materials and stainless steels are conventionally used in structural members and therefore their use in Frease's structural configuration would have been considered an obvious variation on the disclosure of Frease. Regarding claims to specific intermediate layer configurations that may not be disclosed by Frease (e.g. honeycomb cores), the examiner takes Official Notice that honeycomb configurations are now considered conventional for core

Application/Control Number: 09/898,519

Art Unit: 1775

materials that have good load bearing properties. In view of the above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use any conventional core configuration known for load bearing properties for the core of Frease because Frease discloses that this is the purpose of the intermediate layers. Regarding the method claims reciting roll wrapping, the method of wrapping layers and using a mandrel is a conventional method of forming laminated tubular structures in the art and would not be a patentable distinction over Frease for forming Frease's contoured structural member. Regarding article claims that recite the method by which the article is made, Frease may not disclose the same process steps, but these claims are product claims and not process claims. When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Regarding claims reciting an "initiator", any discontinuity in the article (e.g. a joint) may function as an initiator. Regarding claims requiring particular configurations (e.g. bent), pipe are conventionally bent to fit in structures and also to follow terrain and forming a bend in the pipes of Frease would be an obvious variation on Frease's article because it would allow the pipe to be installed in structures and to follow terrain when used outside of structures.

34. Claims 1-24 and 31-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cappa (U.S. Patent 5,848,767).

35. Cappa discloses forming contoured honeycomb structures by applying an inner face sheet to a mandrel and bending a honeycomb core about the mandrel followed by applying an outer

Application/Control Number: 09/898,519

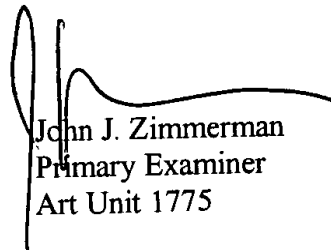
Art Unit: 1775

face sheet. Cappa then applies a bag around the structure and uses a vacuum to compact the contoured honeycomb structure while the adhesives are cured (e.g. see column 4, line 64 - column 6, line 59). Cappa differs from the claims mainly in that Cappa uses a metal honeycomb core and composite sheet inner and outer layers while applicant claims various combinations of metal inner sheet and/or outer sheet construction or combinations of metal and composite sheets in the contoured structure construction. However, Cappa discloses that in order to save weight and meet various requirements for spacecraft, manufacturers in industry have been substituting composite materials for various parts of aluminum structural elements (e.g. see Background of the Invention - column 1, lines 6-67). In addition, the examiner takes Official Notice that using metal for the face sheets in structural honeycomb articles is conventional in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use any combination of composite and metal materials that would best suit the portion of the spacecraft that would be made by Cappa's process because the skilled artisan in this art would find the use of metal and/or composite material face sheets to be an obvious variation on the disclosure of Cappa. Although it is noted that Cappa uses a vacuum bag to secure his structure while it is curing and applicant recites a shrink-wrap materials in some of the pending claims, it would have been obvious to one of ordinary skill in the art at the time the invention was made that a shrink-wrap material performs the same function as the vacuum bag of Cappa and therefore it would not be a patentable distinction over Cappa's disclosed process. Regarding claims reciting an "initiator", any discontinuity in the article (e.g. a joint) may function as an initiator.



***Conclusion***

36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (703) 308-2512. The examiner can normally be reached on 8:30am-5:00pm, M-F. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



John J. Zimmerman  
Primary Examiner  
Art Unit 1775

jjz  
September 27, 2002